

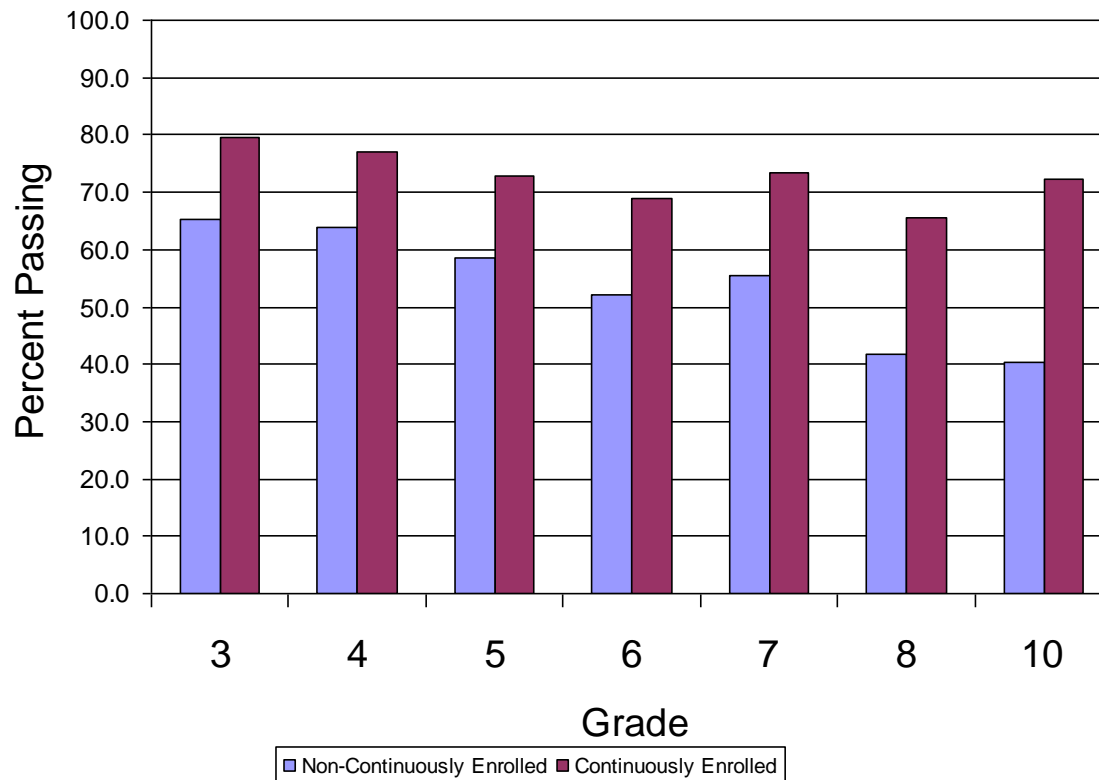
Will They Stay, or Will They Go? Measuring Student Mobility and Its Effects on Achievement

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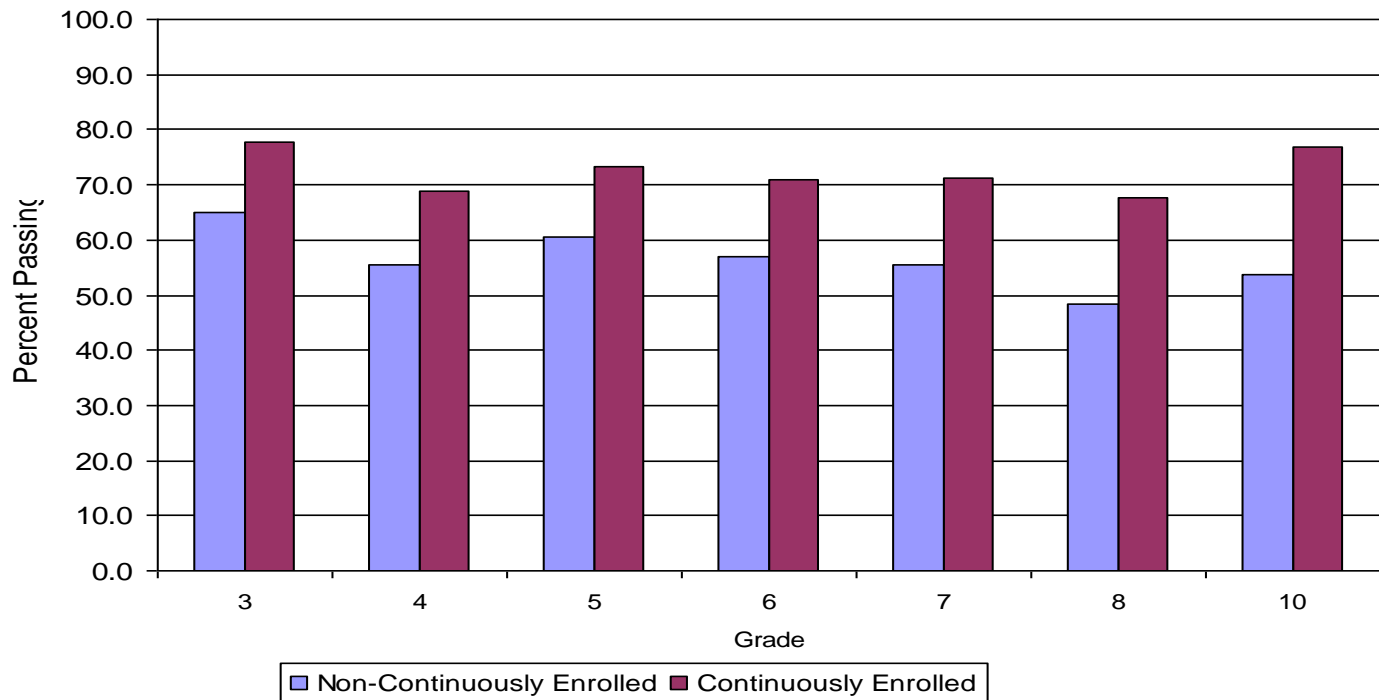
Outline

- Why we care
 - Churn, Market Share, Continuity, Performance
- Mobility in Arizona
- Mobility measures
 - Within-year
 - Between years
- Factors that influence mobility

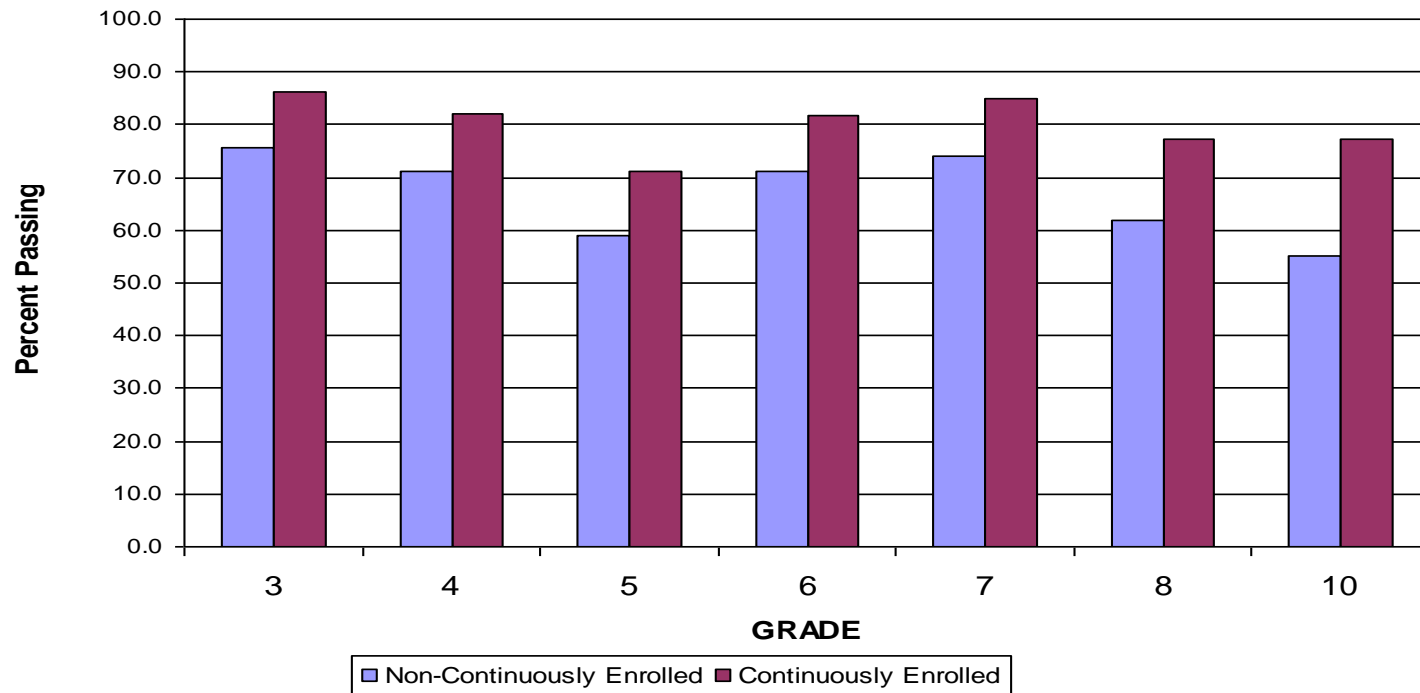
Continuously and Non-Continuously Enrolled, 2007 Math



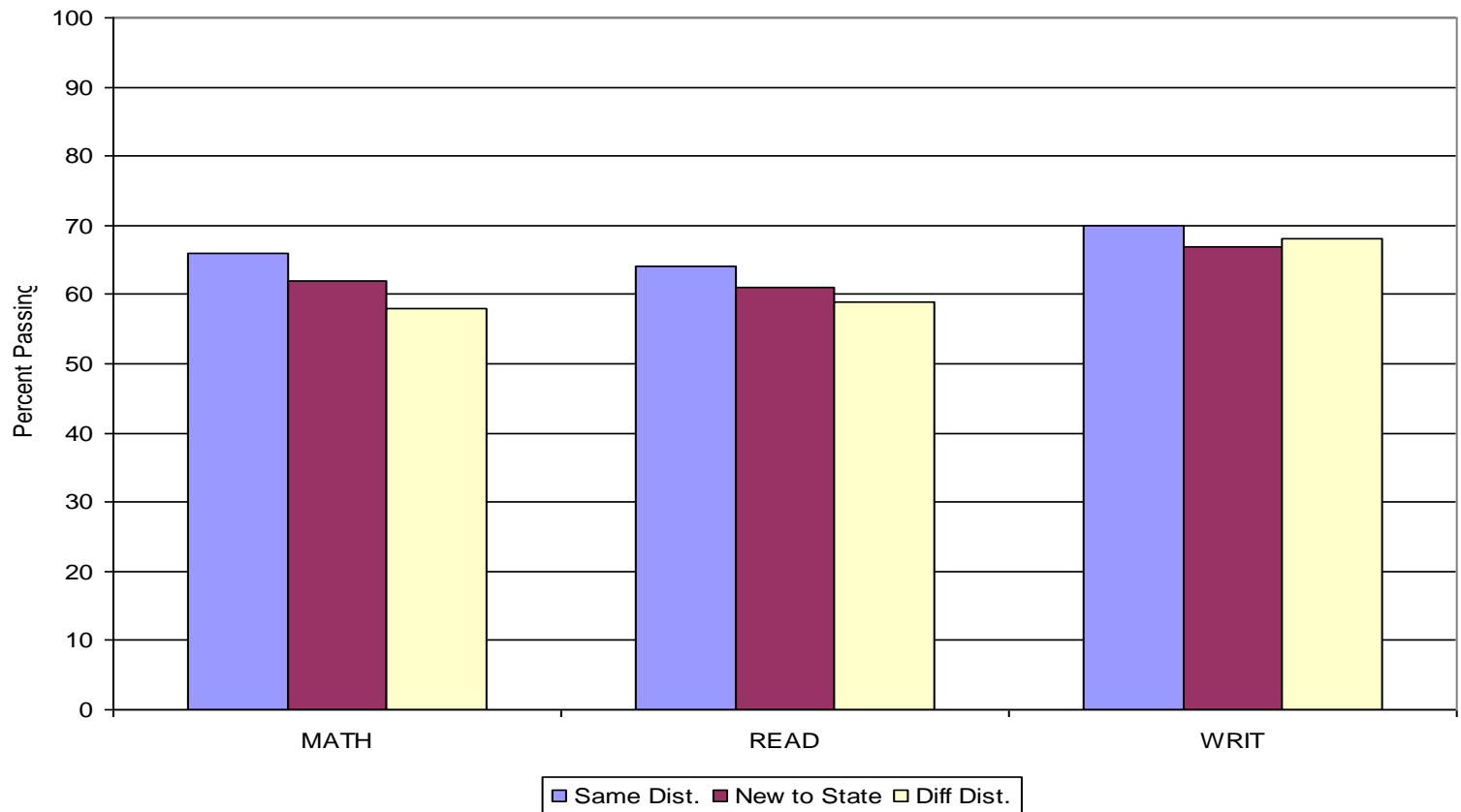
Continuously and Non-Continuously Enrolled, 2007 Reading



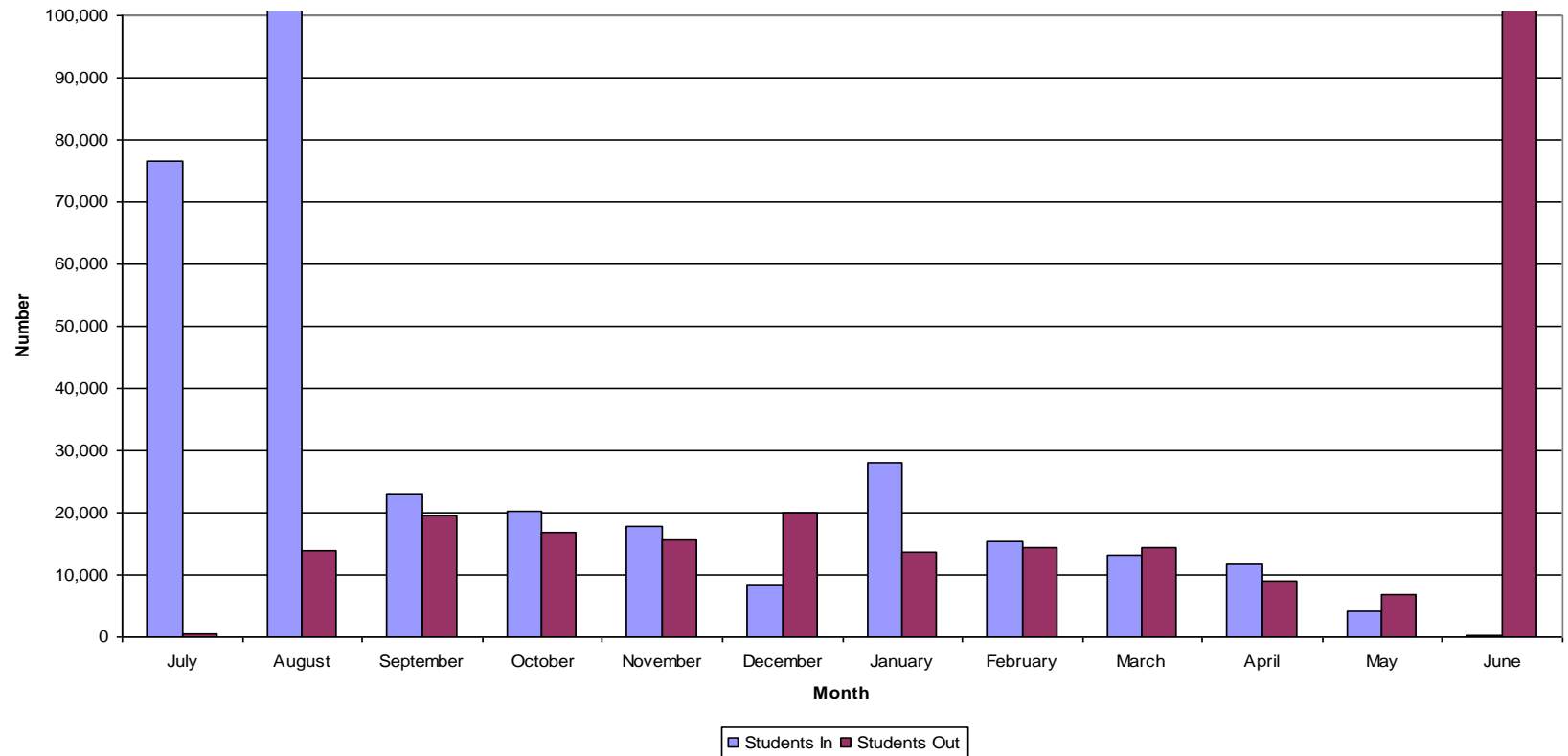
Continuously and Non-Continuously Enrolled, 2007 Writing



Performance by Previous Enrollment



Inflow and Outflow of Students



Where They Go

<div>Enter</div> <div>Leave</div>	Charter	Traditional	Accommodation
Charter	9%	8%	1%
Traditional	12%	67%	1%
Accommodation	1%	1%	1%

Where They Go (Adjusted for Population Size)

Enter Leave	Charter	Traditional	Accommodation
Charter	51.5%	44%	4.5%
Traditional	14.8%	83.4%	1.8%
Accommodation	27.2%	40.6%	32.2%

Why They Go (Elementary School)

- Elementary Grades
 - 90% transfer
 - 6% status unknown
 - 2% home school
 - 1% expulsions

- High School
 - 70% transfer
 - 13% status unknown
 - 5% early grads
 - 4% dropouts
 - 2% expulsions
 - 2% GED
 - 1% home school

Enrollment Spells

Number of Spells	High School	Elementary
1	84%	89%
2	12%	9%
3	3% (9,024)	2% (12,108)

Length of Spell (calendar days)

	High School	Elementary
90 th Percentile	327	331
Median	320	320
10 th Percentile	87	155

Within-Year Mobility Rates

$$\textit{Stayrate} = \frac{\# \text{ students enrolled all year}}{\# \text{ students start of year}}$$

$$\textit{Growth} = \frac{\# \text{ students enrolled at end of year} - 1}{\# \text{ students start of year}}$$

$$\textit{Entryrate} = \frac{\# \text{ students enrolled any time during year} - \# \text{ students at start of year}}{\# \text{ students start of year}}$$

Suburban Elementary School

- Number of students enrolled: 579
- Number of students starting year: 540
- Number of students finishing year: 537
- Number of students enrolled all year: 506
- Stayrate = $506/540 = 94\%$
- Growth = $(537/540) - 1 = -.5 \%$
- Entryrate = $(579 - 540)/540 = 7\%$

Big City High School

- Number of students enrolled: 2,684
- Number of students starting year: 2,302
- Number of students finishing year: 1,936
- Number of students enrolled all year: 1,726
- Stayrate = $1,726/2,302 = 75\%$
- Growth = $(1,936/2,302) - 1 = -16\%$
- Entryrate = $(2,684 - 2,302)/2,302 = 17\%$

Rural Elementary School

- Number of students enrolled: 78
- Number of students starting year: 58
- Number of students finishing year: 62
- Number of students enrolled all year: 46
- Stayrate = $46/58 = 79\%$
- Growth = $(62/58) - 1 = 7\%$
- Entryrate = $(78 - 58)/58 = 34\%$

Small City Middle School

- Number of students enrolled: 748
- Number of students starting year: 631
- Number of students finishing year: 633
- Number of students enrolled all year: 546
- Stayrate = $546/631 = 87\%$
- Growth = $(633/631) - 1 = 0\%$
- Entryrate = $(748 - 631)/631 = 19\%$

Between-Year Mobility Rates

$$\text{Re-enrollment rate (1)} = \frac{\# \text{ students returning year 2}}{\# \text{ students enrolled year 1}}$$

$$\text{Re-enrollment rate (2)} = \frac{\# \text{ students returning year 2}}{\# \text{ students enrolling year 2}}$$

Phoenix Unified District

- Re-enrollment rate 1 = 87%
 - 7% left state
 - 2% two neighboring districts (among 166 entities)
- Re-enrollment rate 2 = 89%
 - 5% from out of state
 - 3% three neighboring districts

Rural Unified District

- Re-enrollment rate 1 = 82%
 - 10% left state
 - 5% five neighboring districts (among 70 entities)
- Re-enrollment rate 2 = 85%
 - 7% from out of state
 - 2% two neighboring districts

Factors that Influence Mobility

- Multinomial logit model on 2007 enrollment data
- Students fall into three categories:
 - Non-mobile
 - “Drop outs” (dropouts, status UK, GED, etc.)
 - “Transfers” (transfers, home school, illness, etc.)

Mobility Factors—Elementary

Factor	Dropout	Transfer
Grade	+	+
African American	1.4	1.6
Hispanic	1.3	1.1
Native American	2.5	1.0
Female	0.7	0.9
Sped	0.5	0.7
EII	0.6	0.7
Low SES	1.4	0.9
AIMS (Math)	-	-

Mobility Factors—High School

Factor	Dropout	Transfer
Grade	-	-
African American	0.9	1.2
Hispanic	1.0	1.0
Native American	1.2	0.8
Female	0.8	0.9
Sped	0.4	0.4
EII	0.6	0.5
Low SES	1.0	0.8
AIMS (Math)	-	-

Conclusions

- Mobility rate used depends on the question asked
 - Churn
 - Market share
 - Continuity
- “Drop outs” look a lot like “Transfers”
- Drop out rate poor measure of retention
 - Attendance, mobility are better